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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,694	12/14/2001	Xiaoru Wang	E3066SMR	1421

7590 02/16/2004
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EXAMINER
YOUN, TAE H

ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
10/020,694	WANG ET AL.	
Examiner	Art Unit	
Tae H Yoon	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

One (Docket 83067/SMR) of the prior art recited in the PTO-1449 has been crossed out since it contains incomplete information.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 18, 19, 25, 32 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited solubility in claims 8 and 25 is indefinite absent a particular temperature used in measuring said solubility since said solubility is dependent on the temperature. The recited molecular weight in claims 18, 19, 32 and 33 is indefinite absent a particular average molecular weight since there is a big difference between a number average molecular weight and weight average molecular weight depending on the polydispersity (M_w/M_n) and since the measurement of molecular weight for polymer would yield an average molecular weight (also see example 1 of US 6,309,787).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-10, 13-15, 19-23, 25-27, 33 and 34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wada et al (US 4,507,378).

Wada et al teach the instant process of making polymer-dye particles at col. 2, lines 37-44 and in example 1. Various dispersants (co-stabilizer) and surfactants are taught at col. 2, line 65 to col. 3, line 33. Various dyes such as azo oil black and initiators are taught at col. 4, lines 12-40. Said azo oil black inherently meets the recited solubility and the polymer of example 1 also inherently meets the recited molecular weight. Homopolymer (using a single monomer) is taught at col. 4, lines 8-9.

Thus, the instant invention lacks novelty.

Claims 1-10, 13-27 and 30-34 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cheng (US 6,309,787).

Cheng teaches the instant miniemulsion polymerization and colorant encapsulate latex in examples. Example 1 shows Mw of 30,000 and an average particle size of 403 nm. The instant co-stabilizers such as cetyl alcohol and hexadecane (col. 5, lines 33-

39) and average diameters (100-1,000 nm) of polymeric particles (col. 8, lines 7-8) are taught. Polymeric composition having a diene component (col. 5, line 60, col. 9, line 13 or col. 11, line 34) inherently yields crosslinking. Various water insoluble pigments and dyes are taught at col. 15, and quinacridone and anthraquinone dye and diazo dye (lines 20-22) are water insoluble. Also, dye taught at col. 15, line 39 is water insoluble since miniemulsion polymerization is dispersions of oil (monomer) in water (col. 12, line 22-65). The dye must be present with oil monomer in order to become a part of the polymeric particles.

Thus, the instant invention lacks novelty.

Claims 1-34 are rejected under 35 U.S.C. 103(a) as obvious over Cheng (US 6,309,787) in view of Moore et al (US 4,698,651), Weber et al (US 5,997,622) or Evans et al (US 6,001,161).

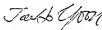
The instant invention further recites aryazoisothiazole dye and transition metal complex of an 8-heterocyclazo-5-hydroxyquinoline over Cheng who teaches various pigments and dyes. Moore et al, Weber et al and Evans et al teach said dyes in abstract.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known dyes taught by Moore et al, Weber et al and Evans et al in making colorant encapsulated polymeric particles of Cheng since Cheng teaches the utilization of any known water insoluble dyes (and pigments) absent showing otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Tae H Yoon
Primary Examiner
Art Unit 1714

THY/February 13, 2004